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Reply to Office Action of September 8, 2003
Attorney Docket: 042390.P10312

REMARKS/ARGUMENTS

Multiple informalities are noted in the specification. These minor errors were made inadvertently and without deceptive intent. Appropriate corrections have been made by the foregoing amendments. It is respectfully requested that Examiner approve and enter these minor corrections. These changes do not limit the scope of the claims or result in prosecution history estoppel.

Claims 7-12 and 14-17 are pending in the application. No claims are currently amended.

The above-referenced patent application has been reviewed in light of the Office Action, mailed September 8, 2003, in which: claims 7-12 and 14-15 are rejected as being considered unpatentable under 35 U.S.C. § 103(a) in light of Applicant's submitted prior art (hereinafter "APA") and Bortolin, et al., (US patent 5,037,179; hereinafter "Bortolin"), and claims 16-17 are rejected as being considered unpatentable under 35 U.S.C. § 103(a) in light of APA, Bortolin, and Cannon, Jr., et al. (US patent 4,973,127; hereinafter "Cannon"). Reconsideration of the above-referenced patent application in view of the following remarks is respectfully requested.

Examiner's rejection of claims 7-12 and 14-15 under 35 U.S.C. § 103(a)

Examiner rejected claims 7-12 and 14-15 as being considered unpatentable under 35 U.S.C. § 103(a) in light of APA and Bortolin. Applicant traverses this rejection. Applicant respectfully asserts that Bortolin is not relevant because Bortolin does not pertain to forming permanent connections between an array waveguide and a fiber ribbon using a method that requires finely aligning the array waveguide in combination with the use of pins.

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Applicant respectfully submits that combining APA with Bortolin is in no way obvious because Bortolin teaches away from APA by providing for disconnectably connecting two fiber optic bundles, whereas applicant claims permanently bonding the fiber optic bundle to the array waveguide. The limitation "permanently bonding" appears in both independent claims (claims 7 and 12). In contrast, Bortolin provides for disconnectable connections. See, for example, Bortolin at column 4, lines 60-61, which states "connectors for *detachable* connecting groups to be used with ribbon-joined optical fibers" (emphasis added).

Furthermore, Applicant respectfully submits that combining APA with Bortolin is in no way obvious because Bortolin teaches away from APA by providing pins which allow no means of fine adjustment, whereas applicant claims finely aligning an array waveguide with a fiber optic bundle. The limitation "finely aligning" appears in both independent claims (claims 7 and 12). In contrast, the point of the invention in Bortolin is to connect two fiber optic ribbons with no means or need for making fine alignments. See, for example, Bortolin at column 7, lines 56-59, which states "the above method can ensure coupling with the fibers in a condition of perfect alignment." Thus, Bortolin teaches neither permanently bonding nor finely aligning, and, indeed, teaches away by teaching that neither are necessary. Since Bortolin teaches away from APA, it would not be obvious to combine Bortolin with APA.

Before proceeding further, Applicant respectfully notes that Examiner mischaracterizes APA in several instances. Examiner, addressing claims 7 and 12, states that "APA, figures 1-3, discloses a method . . . comprising inserting pins (22) into holes . . ." However, APA does not show pins at 22, rather it shows ends of optical fibers (Specification, page 2, lines 7-8). Thus, APA does not disclose

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pins. Furthermore, in addressing claims 9 and 10, Examiner states "APA discloses an optical gel (50)" and "APA discloses the optical gel has an index of refraction similar to channels in the array waveguide." However, Figure 3, to which Examiner is apparently referring, shows Item 50 to be an epoxy (Specification, page 2, line17). Applicant in no instance refers to a gel being used anywhere in Figures 1, 2, or 3.

Applicant also respectfully asserts that Examiner failed to state a *prima facie* case of obviousness under section 103(a) by failing to provide a motivation to combine APA with Bortolin. Section 2143 of the MPEP sets forth the requirements Examiner must satisfy to establish a *prima facie* case of obviousness under 35 U.S.C. § 103. Section 2143 requires the cited patents to contain a suggestion or motivation to combine them. Examiner failed to make this showing because Examiner does not point out a suggestion or motivation to combine APA with Bortolin. Instead, Examiner only makes a conclusory statement that "it would have been obvious to one of ordinary skill in the art at the time the invention was made." In so doing, Examiner has engaged in hindsight speculation that section 2143 and the Federal Circuit expressly proscribe: "the level of skill in the art cannot be relied upon to provide the suggestion to combine references," (MPEP § 2143; citing *AI-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308 (Fed. Cir. 1999)).

It is noteworthy that section 2143 takes pains to make this point clear, elaborating that "a statement that modifications of the prior art to meet the claimed invention would have been 'well within the ordinary skill of the art at the time the claimed invention was made' because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references." (citing *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat.

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App. & Inter. 1993)) (emphasis added). By repeating the mistakes criticized in section 2143 and failing to show a suggestion or motivation to combine APA with Bortolin, Examiner failed to establish a *prima facie* case of obviousness under section 103(a).

Furthermore, even if Bortolin could be combined with APA, a combination that Applicant asserts is improper, the combination would still fail to meet all the elements of the rejected claims. For example, claim 7 requires inserting pins into holes formed in both the fiber optic bundle and the array waveguide. APA does not disclose pins, as discussed above. Bortolin does not disclose inserting pins into both a fiber optic bundle and an array waveguide. Indeed, Bortolin's invention is specific to connecting two fiber optic bundles. Claim 12 contains limitations similar to those addressed above for claim 7, and thus Applicant respectfully traverses Examiner's rejection of claim 12 on at least these same grounds.

In sum, applicant respectfully asserts that claims 7 and 12 are allowable, and that combining Bortolin with APA is not obvious because Bortolin teaches away from forming permanent connections between an array waveguide and a fiber optic bundle and Bortolin also teaches away from finely aligning them. Furthermore, the combination of APA and Bortolin, even if it were proper, which is disputed, fails to suggest, teach, or describe all the limitations of claims 7 or 12. The combination would therefore necessarily fail to meet the limitations of claims 8-11 and 14-15, which depend from and thus include the limitations of claims 7 and 12.

Examiner's rejection of claims 16-17 under 35 U.S.C. § 103(a)

Examiner rejected claims 16-17 as being considered unpatentable under 35 U.S.C. § 103(a) in light of APA, Bortolin and Cannon. Applicant traverses this rejection and respectfully asserts that

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Cannon teaches away from APA and that Examiner failed to provide a motivation to combine APA, Bortolin, and Cannon and, thus, failed to set forth a *prima facie* case of obviousness regarding claims 16-17.

Applicant re-raises here the arguments raised above, asserting that it would not be obvious to combine APA with Bortolin. Furthermore, Applicant respectfully asserts that it would not be obvious to combine Cannon either. Cannon, like Bortolin, teaches away from APA and thus one skilled in the art would not combine Cannon with APA and Bortolin.

Cannon teaches away from APA because Cannon is only concerned with disconnectably connecting fiber optic bundles, not permanently bonding coupling fiber optic bundles with an array waveguide. See, for example, Cannon at column 3, lines 18-19, which states "the optical interconnection . . . may readily be interrupted by detaching plugs 25 and 25'" Cannon also teaches away from APA because Cannon makes no allowance for finely aligning. See, for example, Cannon at column 2, lines 4-5, which states "The alignment of the plugs is effected by pins playlessly contacting the plugs. . . ."). Thus, since Cannon teaches away from APA, one skilled in the art would not combine Cannon with APA.

Finally, Examiner fails to set forth a *prima facie* case of obviousness because the combination of APA with Bortolin does not teach all the elements of claims 7 or 12, as discussed above, and Examiner does not rely on Cannon to supply any of the missing elements of claims 7 or 12. Thus, the combination of APA, Bortolin and Cannon, even if proper, which Applicant disputes, necessarily fails to set forth a *prima facie* case of unpatentability under 35 U.S.C. § 103(a) for claims 7 and 12. Since claims 16-17 include all the elements of claims 7 and 12, respectively, the

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combination of APA, Bortolin, and Cannon likewise fails to teach each and every element of claims 16-17. Therefore, Applicant respectfully traverses the rejection of claims 16-17.

CONCLUSION

In view of the foregoing, it is respectfully asserted that all of the claims pending in this patent application are in condition for allowance. If the Examiner has any questions, Examiner is invited to contact the undersigned at (703) 633-0927. Reconsideration of this patent application and early allowance of all the claims is respectfully requested.

Respectfully submitted,



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